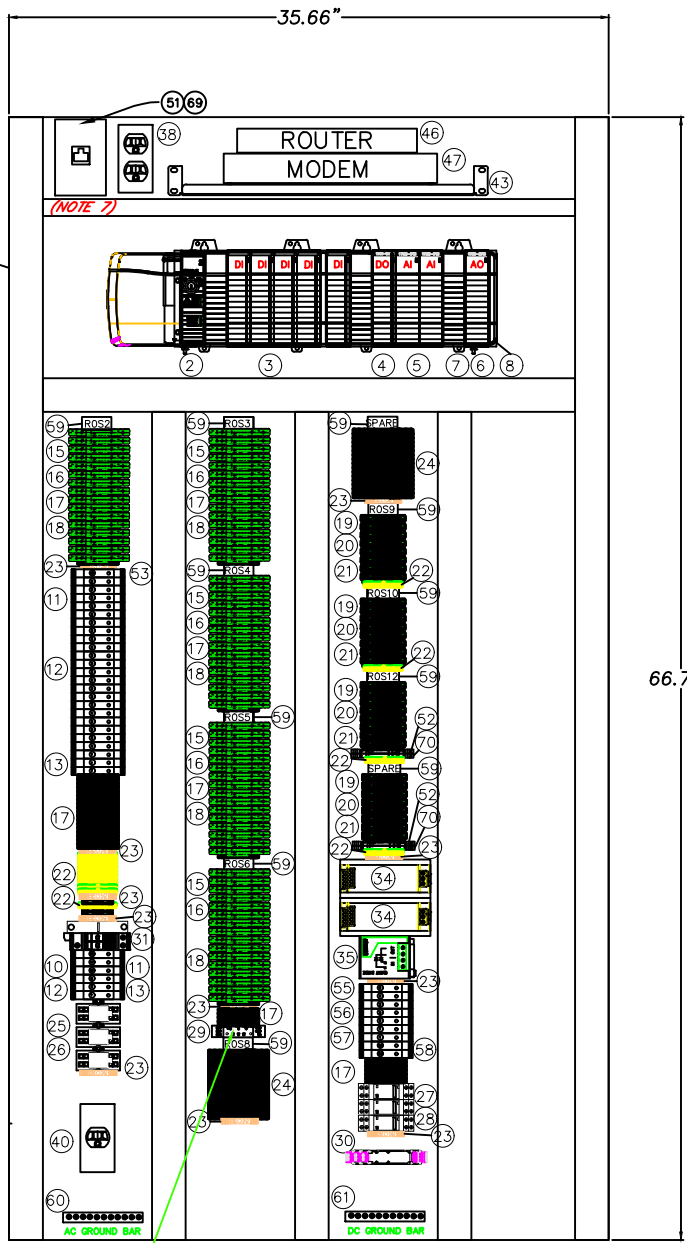


PANEL DEPTH = 19.69"  
PLC PANEL FRONT VIEW



BACK PANEL VIEW

| BILL OF MATERIALS |                    |                 |  |   |          |
|-------------------|--------------------|-----------------|--|---|----------|
| ITEM              | PART NUMBER        | SUPPLIER        | LABEL  | DESCRIPTION   | QUANTITY |
| 1                 | 1756-PA75          | ALLEN BRADLEY   |  | CONTROLLOGIX POWER SUPPLY   | 1        |
| 2                 | 1756-L82E          | ALLEN BRADLEY   |  | CONTROLLOGIX CPU  | 1        |
| 3                 | 1756-IA16I         | ALLEN BRADLEY   |  | CONTROLLOGIX 16-POINT AC DIGITAL INPUT CARD                       | 5        |
| 4                 | 1756-QA16I         | ALLEN BRADLEY   |  | CONTROLLOGIX 16-POINT AC DIGITAL OUTPUT CARD                      | 1        |
| 5                 | 1756-IF8IH         | ALLEN BRADLEY   |  | CONTROLLOGIX HART 8-POINT ANALOG INPUT CARD                       | 2        |
| 6                 | 1756-OF8IH         | ALLEN BRADLEY   |  | CONTROLLOGIX HART 8-POINT ANALOG OUTPUT CARD                      | 1        |
| 7                 | 1756-N2            | ALLEN BRADLEY   |  | CONTROLLOGIX SLOT FILLER  | 3        |
| 8                 | 1756-A13           | ALLEN BRADLEY   |  | CONTROLLOGIX 13-SLOT CHASSIS                                      | 1        |
| 9                 | 9926251015         | WEIDMULLER      | CBRL-15A   | SURGE PROTECTOR CIRCUIT BREAKER 1P 15A                            | 1        |
| 10                | 9102003500         | WEIDMULLER      | CBRL1-15A, CBRUPS-15A  | CIRCUIT BREAKER 1P 15A  | 2        |
| 11                | 9101803500         | WEIDMULLER      | CBRREC2-5A, CBR117-5A, CBR120-5A - CBR122-5A   | CIRCUIT BREAKER 1P 5A   | 5        |
| 12                | 9101703500         | WEIDMULLER      | CBRP81-3A, CBR100-3A - CBR115-3A, CBR118-3A  | CIRCUIT BREAKER 1P 3A   | 18       |
| 13                | 9101203500         | WEIDMULLER      | CBRSW1-1A, CBR116-1A, CBR119-1A  | CIRCUIT BREAKER 1P 1A   | 3        |
| 14                | 9911050000         | WEIDMULLER      | CBR404-0.5A, CBR405-0.5A   | CIRCUIT BREAKER 1P 0.5A DC - BACKUP CONTROL SPARES                | 2        |
| 15                | 1162960000         | WEIDMULLER      | IO-2/0/A - IO-2/15/A, IO-3/0/A - IO-3/15/A, IO-4/0/A - IO-4/15/A, IO-5/0/A - IO-5/15/A, IO-6/0/A - IO-6/15/A               | TERMINAL BLOCK, FUSED, 120Vac W/ TRIP INDICATION                  | 80       |
| 16                | 1142990000         | WEIDMULLER      | IO-2/0/B - IO-2/15/B, IO-3/0/B - IO-3/15/B, IO-4/0/B - IO-4/15/B, IO-5/0/B - IO-5/15/B, IO-6/0/B - IO-6/15/B, N1, N2, 0VDC | END PLATE FOR ABOVE   | 80       |
| 17                | 1020100000         | WEIDMULLER      |  | TERMINAL BLOCK, FEED THROUGH, FOR DIO, NEUTRAL AND 0VDC TERMINALS | 108      |
| 18                | 1179500000         | WEIDMULLER      |  | END PLATE FOR ABOVE   | AS REQ.  |
| 19                | 0687460000         | WEIDMULLER      | IO-9.0+ - IO-9.7+, IO-10.0+ - IO-10.7+, IO-9.0- - IO-9.7-, IO-10.0- - IO-10.7-, IO-12.0+ - IO-12.7+, IO-12.0- - IO-12.7-   | TERMINAL BLOCK, 2-TIER, KNIFE DISCONNECT                          | 32       |
| 20                | 0687560000         | WEIDMULLER      |  | END PLATE FOR ABOVE   | 32       |
| 21                | 1020090000         | WEIDMULLER      | SHLD   | TERMINAL BLOCK, FEED THROUGH, GREEN                               | 24       |
| 22                | 1010100000         | WEIDMULLER      | GND  | TERMINAL BLOCK, GROUND  | 11       |
| 23                | 1061200000         | WEIDMULLER      |  | END BRACKET FOR W SERIES TERMINALS                                | 10       |
| 24                | 1123040000         | WEIDMULLER      | CR-00/8/0-CR-00/8/15   | INTERPOSING RELAY, 120VAC COIL, 1 C/O CONTACT                     | 32       |
| 25                | 700-HF32A14        | ALLEN BRADLEY   | PF1, CR22, CR23  | CONTROL RELAY, 120VAC COIL, 2 C/O CONTACTS                        | 3        |
| 26                | 700-HN116          | ALLEN BRADLEY   |  | RELAY BASE FOR ABOVE  | 3        |
| 27                | 1133520000         | WEIDMULLER      | UPS #1 R/1, UPS #1 R/2   | CONTROL RELAY, 24Vdc COIL, 2 C/O CONTACTS                         | 2        |
| 28                | 7760056225         | WEIDMULLER      |  | RELAY BASE FOR ABOVE  | 2        |
| 29                | 8647680000         | WEIDMULLER      | TD22   | TIMING RELAY, MULTIFUNCTION                                       | 1        |
| 30                | KFA5-SR2 EX2.W     | PEPPERL & FUCHS | ISR-1  | INTRINSICALLY SAFE BARRIER, DUAL CHANNEL                          | 1        |
| 31                | 2859563            | PHOENIX         |  | LINE SURGE SUPPRESSOR   | 1        |
| 32                | 95X1500            | EATON           | UPS #1   | 95X UPS 1500VA  | 1        |
| 33                | RELAY-MS           | EATON           | UPS #1   | RELAY CARD FOR ABOVE  | 1        |
| 34                | 2938581            | PHOENIX         |  | 24VDC POWER SUPPLY  | 2        |
| 35                | 2938963            | PHOENIX         |  | 24VDC POWER SUPPLY REDUNDANCY MODULE FOR ABOVE                    | 1        |
| 36                | FLKDS              | HAMMOND         |  | PANEL DOOR LIGHT SWITCH   | 1        |
| 37                | FLX10LED           | HAMMOND         |  | PANEL LIGHT - LED 26"   | 1        |
| 38                | IG5262             | HUBBELL         |  | ORANGE DUPLEX RECEPTACLE, ISOLATED GROUND                         | 1        |
| 39                | P-R62-F3R0         | GRACE           |  | PROGRAMMER PORT   | 1        |
| 40                | IG5261             | HUBBELL         |  | SINGLE RECEPTACLE, UPS FEED, IVORY                                | 1        |
| 41                | HME18105           | HAMMOND         |  | 70.85"X 39.79"X 19.69" NEMA 12 FREE STANDING ENCLOSURE            | 1        |
| 42                | HSP185             | HAMMOND         |  | SIDE PANELS FOR ABOVE ENCLOSURE                                   | 1        |
| 43                | RASU240515BK1      | HAMMOND         |  | NETWORK EQUIPMENT SHELF   | 1        |
| 44                | PKT1212            | HAMMOND         |  | DRAWING HOLDER  | 1        |
| 45                | SP1801894          | HAMMOND         |  | LAPTOP SHELF, 22"   | 1        |
| 46                |                    |                 |  | SERVICE ACCESS SWITCH (FREE ISSUED)                               | 1        |
| 47                |                    |                 |  | CISCO INTEGRATED SERVICES ROUTER (FREE ISSUED)                    | 1        |
| 48                | 800T-QTH2R         | ALLEN BRADLEY   | PL1  | ILLEGAL ENTRY PILOT LIGHT, RED, LED, PUSH TO TEST                 | 1        |
| 49                | 800T-QTH2R         | ALLEN BRADLEY   | PL2  | SECURITY SYSTEM ARMED PILOT LIGHT, RED, LED, PUSH TO TEST         | 1        |
| 50                | 8396K107           | EATON           |  | WET WELL LEVEL TRANSMITTER LOCAL DISCONNECT SWITCH                | 1        |
| 51                | NS72655            | HUBBELL         |  | RJ11 JACK WITH BOX AND FACEPLATE                                  | 1        |
| 52                | 2864419            | PHOENIX         |  | SIGNAL ISOLATOR   | 2        |
| 53                | 9101903500         | WEIDMULLER      | CBRUPS-10A, CBRREC1-10A  | CIRCUIT BREAKER 1P 10A  | 2        |
| 54                | SPARE              |                 |  |   |          |
| 55                | 9101803500         | WEIDMULLER      | CBR200-5A  | CIRCUIT BREAKER 1P 5A DC  | 1        |
| 56                | 9101703500         | WEIDMULLER      | CBR201-3A - CBR204-3A  | CIRCUIT BREAKER 1P 3A DC  | 4        |
| 57                | 9101203500         | WEIDMULLER      | CBR206-1A, CBR207-1A   | CIRCUIT BREAKER 1P 1A DC  | 2        |
| 58                | 9104183500         | WEIDMULLER      | CBR205-0.2A  | CIRCUIT BREAKER 1P 0.2A DC - UPS RELAYS                           | 1        |
| 59                | 292460000          | WEIDMULLER      |  | GROUP MARKER  | 11       |
| 60                | PK15GTA            | SQUARE-D        |  | AC GROUND BAR   | 1        |
| 61                | NSCH-1M            | WEIDMULLER      |  | ISOLATED DC GROUND BAR  | 1        |
| 62                | VSC15/10           | SCEPTER         |  | DISCONNECT SWITCH COVER   | 1        |
| 63                | RCI 960-MA         | RUTHERFORD      |  | SECURITY KEYSWITCH  | 1        |
| 64                | 7ML5033-2FA00-2A   | SIEMENS         |  | MILLTRONICS MULTIRANGER 200 HIMI CONTROLLER                       | 1        |
| 65                |                    | BELL SUPPLIED   |  | BIX BLOCK AND LIGHTNING ARRESTOR                                  | 1        |
| 66                |                    | PANDUIT         |  | SLOTTED WIRE WAY, VARIOUS WIDTHS, 4" (100MM) DEEP                 | AS REQ.  |
| 67                |                    |                 |  | MISC. COMPONENTS - DIN RAIL, GROUNDING, WIRE LABELS               | AS REQ.  |
| 68                | CD16652-09F004     | COMMSCOPE       |  | PATCH CABLES  | AS REQ.  |
| 69                | J8X3510W-A         | PANDUIT         |  | SINGLE GANG TWO-PIECE SNAP TOGETHER BOX                           | 1        |
| 70                | 2864150            | PHOENIX         |  | NON-POWERED LOOP SIGNAL ISOLATOR                                  | 2        |
| 71                | ARP-3615AP-E01-007 | ARISTA          |  | THIN CLIENT   | 1        |

NOTES:

- LAPTOP SHELF TO BE MOUNTED ON OUTER SIDE OF INNER SWING DOOR. THE LAPTOP SHELF TO BE HINGED AT THE TOP AND FOLD UP. SHELF HEIGHT IS 40" FROM THE FLOOR, NOT THE BOTTOM OF THE PANEL.
- LITERATURE POCKET TO BE MOUNTED ON INNER SIDE OF INNER SWING DOOR.
- AVOID RUNNING CONDUIT THROUGH TOP OF ENCLOSURE.
- NO CONDUIT ENTRIES DIRECTLY BELOW OR BESIDE THE UPS.

THESE DRAWINGS ARE TEMPLATE DRAWINGS

- REMOVE THIS NOTE AS PART OF THE DESIGN PROCESS.
- MODIFY THIS DRAWING AS DIRECTED IN THE SCADA STANDARDS.
- ADD ADDITIONAL DETAILS AS REQUIRED TO MEET THE PROJECT SPECIAL REQUIREMENTS.
- WHEN THE CONSULTANT DEVIATES FROM THIS TEMPLATE THEY ARE REQUIRED TO NOTIFY HALTON REGION THROUGH THE USE OF THE STANDARDS DEVIATION MEMO.
- FUSED TERMINAL BLOCKS AND CIRCUIT BREAKERS TO BE SIZED APPROPRIATELY.
- SHOW ADDITIONAL RIO RACKS (UP TO A MAXIMUM OF 2) ONLY IF NECESSARY BASED ON DESIGN REQUIREMENTS.
- THE CONSULTANT IS TO SPECIFY SIGNAL ISOLATORS WHERE REQUIRED. FOLLOW MANUFACTURERS' SPECIFICATIONS FOR GROUNDING OF SHIELDS.
- BILL OF MATERIALS AND QUANTITIES THEREIN ARE TO BE MODIFIED AS REQUIRED TO SUIT THE DESIGN.

| NO     | Date   | By    | REVISIONS  | MAN/CAD |
|--------|--------|-------|------------|---------|
| Design | ---    | Ch'kd | ---        | Date    |
| Drawn  | ---    | Ch'kd | ---        |         |
| Scale  | N.T.S. |       | References |         |

Field Notes

Stamp

Regional

ACCEPTED FOR CONSTRUCTION OF REGIONAL INFRASTRUCTURE

REVIEWED FOR COMPLIANCE WITH REGIONAL STANDARDS ONLY.

Director, Water & Wastewater Treatment

Manager, Plant Capital & Engineering



TITLE REGIONAL MUNICIPALITY OF HALTON  
CONSULTANT PROJECT TITLE

TYPE II FREE STANDING CONTROL PANEL  
INNER LAYOUT

Consultant File NO

Regional Drawing NO

CONTRACT NO

Drawing NO 1802

SHEET XX OF XX